

## SEVERE LOCAL STORMS, AUGUST, 1931—Continued

Place	Date	Time	Width of path yards <sup>1</sup>	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Bushton (near), Ill.....	27	5 p. m.....	2,640	-----	13,000	Hail.....	Crops and roofs damaged; glass broken; path 3 miles long.	Official, U. S. Weather Bureau.
Charleston, S. C. (north of).....	27	6 p. m.....	-----	-----	1,500	Thunderstorm and wind.	Damage to crops and outhouses.....	Do.
Rock County northeastward to Lake Michigan, Wis.....	27	7 p. m.....	-----	-----	-----	Thunderstorm and wind squalls.	Trees uprooted; poles and overhead wires blown down; corn lodged.	Do.
Chickasaw, Floyd, Scott, Wright, and Delaware Counties, Iowa.....	27	P. m.....	-----	-----	-----	Wind and hail.....	Crops, roofs, farm buildings and equipment, and trees damaged.	Do.
Delphi, Ind. (3 miles west).....	27	..do.....	-----	-----	5,000	Small tornado.....	Barn and several small buildings wrecked; trees blown down.	Do.
Linn and Jackson Counties, Iowa.....	27	..do.....	-----	-----	-----	Wind, rain and flood.	Sewers and cellars flooded; wires damaged; railway track and 8 bridges washed out.	Do.
Jo Daviess, Carroll, Lake, and Whiteside Counties, Ill.....	27	-----	-----	-----	-----	Wind and electrical.	Number of buildings struck; barns burned; stock killed; wire services crippled; orchards hurt.	Do.
Norwich, Oneonta, and Goshen, N. Y.....	27	-----	-----	-----	-----	Heavy rain.....	Basements and low lands flooded.	Do.
Providence, R. I., and vicinity.....	27-28	-----	-----	-----	-----	Thunderstorm.....	12 houses struck by lightning; many telephones out of order.	Do.
Sparta, Ill., and vicinity.....	28	2 a. m.....	20-30	-----	50,000	Probably tornado.....	Roofs torn off; two-story brick building practically demolished; windows and walls pushed out.	Do.
Carlsbad (near), N. Mex.....	28	4 p. m.....	1,760	-----	32,000	Hail.....	Much cotton destroyed or damaged.....	Do.
Emmitsburg, (near), Md.....	28	P. m.....	-----	-----	10,000	Thunderstorm and wind.	Garage and small buildings burned or wrecked; trees uprooted.	Do.
Yuma, Ariz.....	29	-----	-----	-----	-----	Hail, wind, and rain.	Skylights, windows, and trees broken; small farm buildings demolished; cotton hurt.	Do.
Benton, Black Hawk, Carroll, Marshall, Story, and Monroe Counties, Iowa.....	31	6:10 p. m.....	-----	-----	44,000	Wind.....	Buildings, crops, trees, and overhead wires damaged.	Do.
Riley County, Kans.....	31	6:30 p. m.....	6 mi.	-----	50,000	Wind and hail.....	Barn and pavilion wrecked; crops damaged; windows and light globes broken; roofs pierced; 1 person injured; path 7 miles long.	Do.
Volland to Maple Hill and Eskridge, Kans.....	31	9:45 p. m.....	2-10 mi.	-----	25,000	..do.....	Windows broken; roofs and crops damaged; path 25 miles long.	Do.
Southeastern counties, Wis.....	31	P. m.....	-----	-----	12,000	Wind, squalls, thunderstorm, and hail.	Considerable damage to farm properties; tobacco injured.	Do.

<sup>1</sup> "Mi." signifies miles instead of yards.

## RIVERS AND FLOODS

(River and Flood Division, Montrose W. Hayes in Charge)

By RICHMOND T. ZOCH

Important overflows occurred in the southeastern part of the country and in the Colorado River basin. The accompanying table of floods shows the crests reached.

Damage was reported as follows: In the Roanoke River system, \$7,000; in the Neuse River system, \$8,000; in the Cape Fear River system, \$5,000; in the Pee Dee River system, \$3,000; and in the Colorado River system, \$3,000. The damage caused by high water in the Pearl River system was given in the July issue of the MONTHLY WEATHER REVIEW. There were no reports of losses received from the Tar or Santee River systems.

The value of property saved by warnings was, along the Roanoke River, \$16,000; the Tar River, \$1,000; the Neuse River, \$6,000; the Cape Fear River, \$8,000; and the Pee Dee River, \$25,000.

Heavy local rains resulting in overflows in small streams, where it is impracticable to maintain a warning service, caused damage as follows: On August 1, \$100,000 around Helena, Mont., and \$50,000 around Sioux City, Iowa; and on August 13, \$25,000 around Salt Lake City, Utah. Other overflows in small streams were reported, but the extent or amount of damage was not given.

Most of the rivers of the Mississippi system, except those in the Ohio basin, were at the lowest stages ever recorded in a summer month. Most of the rivers in California were also extremely low.

Table of flood stages in August, 1931

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE					
Roanoke:	<i>Feet</i>			<i>Feet</i>	
Randolph, Va.....	21	23	24	21.4	24
Weldon, N. C.....	30	24	25	34.1	25
Scotland Neck, N. C.....	23	13	13	23.0	13
		24	26	25.2	26
Williamston, N. C.....	9	13	19	9.8	18
		26	31	9.9	30
Fishing Creek: Enfield, N. C.....	15	13	15	15.4	14
Tar: Rocky Mount, N. C.....	9	13	13	9.2	13
Neuse:					
Neuse, N. C.....	15	5	6	17.0	5
		1	2	14.5	2
Smithfield, N. C.....	14	5	8	19.0	7
		12	17	16.8	13
		23	23	14.0	23
Cape Fear:					
Fayetteville, N. C.....	35	23	24	36.2	23
Elizabethtown, N. C.....	22	14	16	22.7	16
		22	26	29.0	24
Peedee:					
Cheraw, S. C.....	27	22	23	30.0	23
Mars Bluff Bridge, S. C.....	17	24	30	19.5	27
Poston, S. C.....	18	29	31	18.9	30, 31
Santee: Rimini, S. C.....	12	12	18	13.0	14, 15
		30	30	12.0	30
EAST GULF OF MEXICO DRAINAGE					
Pearl: Jackson, Miss.....	20	19	10	26.4	5
GULF OF CALIFORNIA DRAINAGE					
Gila: Gila Bend, Ariz.....	5	10	11	7.5	11
Colorado: Parker, Ariz.....	7	6	6	9.5	6

<sup>1</sup> In July.

All dates are in August, unless otherwise indicated.